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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------------------------------------------------------------------|-------------|----------------------|---------------------|------------------|
| 10/716,361 | 11/17/2003 | Hiroshi Iizuka | FUJI 20.747 | 6680 |
| 26304 | 7590 | 04/11/2006 | EXAMINER | |
| KATTEN MUCHIN ROSENMAN LLP 575 MADISON AVENUE NEW YORK, NY 10022-2585 | | | | DIAcou, ARI M |
| | | ART UNIT | | PAPER NUMBER |
| | | 3663 | | |

DATE MAILED: 04/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/716,361 | IIZUKA ET AL. | |
| | Examiner | Art Unit | |
| | Ari M. Diacou | 3663 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 07 March 2006.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) 1-4,7-13,15-18,20-28 and 30-32 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 5,6,14,19 and 29 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 17 November 2003 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of species B, drawn to claims 5, 6, 14, 19, 29 and figures 6-10 in the reply filed on 3-7-2006 is acknowledged.
2. Claims 1-4,7-13,15-18,20-28 and 30-32 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 3-7-2006.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
6. Claim 5 and 14, 19 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugaya et al. (PGPub No. 2001006395) in view of Itou et al. (USP No. 5986799).
7. Regarding claim 5 and 29, Sugaya discloses an optical amplifier comprising:
- first and second optical amplifier units;
 - a first variable optical attenuator to attenuate an output of the first optical amplifier unit;

- a first control unit to control gains of the first and second optical amplifier units based on an output of the second variable optical attenuator and an output of the second optical amplifier unit; and

but fails to disclose:

- a second variable optical attenuator to attenuate an input of the first optical amplifier unit;
- a second control unit to control attenuation quantities of the first and second variable optical attenuators based on the input and the output of the optical amplifier unit and an input and the output of the second optical amplifier unit.

Itou teaches a variable optical attenuator at the input of an EDFA. Therefore, it would have been obvious to one skilled in the art (e.g. an optical engineer) at the time the invention was made, to place the variable optical attenuator of Itou in the amplifier of Sugaya and have Sugaya's AGC circuits control the variable optical attenuator, for the advantage of transient control provided by Itou [Abstract].

8. Regarding claim 14, Sugaya discloses automatic gain control and automatic level control.

9. Regarding claim 19, Sugaya discloses the optical amplifier as claimed in claim 14, wherein:

- each of the first and second optical amplifier units includes an optical amplifying medium and a pump light source to supply a pump light to the optical amplifying medium, and [9₁ and 9₂]

- the gain of each of the first and second optical amplifier units is controlled by an optical power of the pump light output from the pump light source thereof.
[Inherent, this is the definition of optical amplification]

10. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sugaya et al. (PGPub No. 2001006395) in view of Itou et al. (USP No. 5986799), the parent claim 5 being rejected above. Sugaya discloses an optical amplifier comprising:

- first and second photodetectors to convert the input and the output of the first optical amplifier unit into electrical signals; [4₁ and 4₂]
- a third photodetector to convert the output of the second variable optical attenuator into an electrical signal; [13]
- and fourth and fifth photodetectors to convert the input and the output of the second optical amplifier unit into electrical signals, [4₃ and 4₄]

But fails to disclose:

- said third and fifth photodetectors supplying the electrical signals output therefrom to the first control unit,
- said first, second, fourth and fifth photodetectors supplying the electrical signals output therefrom to the second control unit.

However it is immaterial to the operability or patentability how the control circuits of the present invention are organized, since almost any conceivable electronic circuit can be realized at the present state of the art. Therefore, it would have been obvious to one skilled in the art (e.g. an optical engineer) at the time the invention was made, to have

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the first and third PD's routed to the first control circuit and the rest routed to the second, for the advantage of modularity.

Conclusion

11. While patent drawings are not drawn to scale, relationships clearly shown in the drawings of a reference patent cannot be disregarded in determining the patentability of claims. See In re Mraz, 59 CCPA 866, 455 F.2d 1069, 173 USPQ 25 (1972).

12. The references made herein are done so for the convenience of the applicant. They are in no way intended to be limiting. The prior art should be considered in its entirety.

13. The prior art which is cited but not relied upon is considered pertinent to applicant's disclosure.

14. As to limitations which are considered to be inherent in a reference, note the case law of In re Ludtke, 169 U.S.P.Q. 563; In re Swinehart, 169 U.S.P.Q. 226; In re Fitzgerald, 205 U.S.P.Q. 594; In re Best et al, 195 U.S.P.Q. 430; and In re Brown, 173 U.S.P.Q. 685, 688.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ari M. Diacou whose telephone number is (571) 272-5591. The examiner can normally be reached on Monday - Friday, 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Keith can be reached on (571) 272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AMD 4/10/2006



JACK KEITH
SUPERVISORY PATENT EXAMINER